

ABSTRACT OF THE DISCLOSURE

An apparatus and method is provided for analyzing or conditioning an electrochemical bath. One aspect of the invention provides a method for analyzing an electrochemical bath in an electrochemical deposition process including providing a first electrochemical bath having a first bath composition, utilizing the first electrochemical bath in an electrochemical deposition process to form a second electrochemical bath having a second bath composition and analyzing the first and second compositions to identify one or more constituents generated in the electrochemical deposition process. Additive material having a composition that is substantially the same as all or at least some of the one or more constituents generated in the electrochemical deposition process may be added to another electrochemical bath to produce a desired chemical composition. The constituents may be added at the beginning of the use of the bath to initially condition the electrochemical bath or may be added, preferably either continuously or periodically, during the electrochemical deposition process.